Sarah Anderson - Teaching Philosophy

As long as I can remember my curiosity about the structure of the human body and how it works has intrigued me. I find it absolutely astounding how the human body has developed and every part is interconnected; every part works on its own but all systems must work together to achieve the entity of the human being. I have spent a great deal of time pursuing and in-depth examination of the human body in order to become a content expert. Through teaching I have the privilege of sharing my knowledge and passion for anatomy in a formal capacity.

Understanding the minutia of the human body is not enough to be an excellent educator. As someone genuinely interested in creating an exceptional learning experience, I believe it is imperative to also strive to understand how best do we as educators convey content effectively to students and apply this in practice. In 2013, I began a PhD specializing in medical education at the University of Calgary and took on the graduate assistant (teaching) position for MDSC 521: Human Anatomy (a fourth year human gross anatomy course in the Bachelor of Health Sciences program). *This* also marked a time when I started evolving as an educator. Over the past three years I have immersed myself in a deliberate scholastically informed process in order to grow and create my own voice as an educator. Given my exploration, the emerging themes that encompass my current teaching philosophy include: active engagement of students in the learning process; focusing on learning as a collaborative endeavor; the importance of continuity when constructing and assessing knowledge; the essential role formative feedback plays in summative assessments; the role of an educator in fostering curiosity; finally, the importance of engaging in the community of educational scholarship in order to advance the practice of teaching.

True learning occurs when students are able to actively engage with content. Outsiders often view the process of learning anatomy as one requiring a high level of rote memorization. Instead, I strive to involve students in understanding concepts through hands-on exploration of materials and encourage application of their knowledge in everyday activities. For example, I will often explain clinical conditions, injuries, or normal functioning from a structural, mechanistic, or developmental anatomical perspective to demonstrate the importance of a strong foundation in anatomy knowledge when problem solving. I believe the best way to learn something is to teach others. To encourage peer teaching I foster small group work in the lab as students explore specimens and in the classroom as students engage in problem-based learning. This approach motivates students to identify concepts that may be unclear and use their collective knowledge to rationalize potential solutions. My role in these instances is to listen to student reasoning, provide prompting questions when an impasse is reached, and finally affirm or correct student understanding when a consensus is reached. When students report back about sharing their everyday anatomy knowledge with others outside the classroom or are engaging in lively anatomical debates with their classmates, I know that students have moved beyond rote memorization to understanding relevance of foundational knowledge and *applying* that knowledge to new situations.

Learning is a collaborative endeavor. I believe everyone in the classroom is part of a community where each member has a unique perspective that can add value to a learning interaction. Therefore I encourage a collaborative approach by creating an ongoing back-and-forth dialogue as I facilitate learning opportunities. In order for this to be successful, early on I strive to develop an approachable rapport with students such that they feel comfortable participating in the dialogue and asking questions when concepts are not clear. This allows me as an instructor to gauge the boundaries of student understanding and scaffold new content within students' zone of proximal development. "I don't know." As an educator I embrace these words and am never afraid to admit that I don't know an answer to a question. However, this is never the end of the conversation with students. Given my in depth training and diverse experience, I can usually formulate and explain a thoughtfully reasoned hypothesis. Furthermore, I use these situations as an opportunity to encourage students to contribute personal

knowledge or reasoning based on their perception of the question at hand. Importantly, if a resolution is not met, I will follow up by finding and reporting back the solutions. Through this approach, I earn respect from students and create an encouraging environment for students to practice articulating their own understanding.

Continuity in constructing and assessing knowledge is key. Progressive learning is reinforced when each learning interaction builds upon the previous encounter. As a graduate assistant (teaching) in MDSC 521: Human Anatomy, I work closely with the course instructor, Dr. Heather Jamniczky, in order to ensure that lab content supports lecture materials. I attend all lectures, often actively participating in discussion to offer my perspective, and I continue those discussions in the lab sessions. For example, a question in a lecture may lead to discussion of an interesting case example. If an example is available in our anatomical specimen collection, I will coordinate with the anatomy laboratory staff to have this specimen available in that week's lab. Over the previous three years Dr. Jamniczky and I have experimented with the focus and order of lectures and labs in this course based on student feedback and now in the third year we believe we have reached an optimized flow of content. As we engaged in this process we gave careful consideration to how these changes should be reflected in the student formative and summative assessments and altered the assessments to clearly align with these course changes.

Formative feedback is crucial for success on summative assessments. As students progress through formative assessments in a course, I believe that timely constructive feedback is essential to promote success on summative assessments. As such I provide written feedback to students each week on lab assignments in addition to ongoing informal feedback during labs and lectures. Summative peripatetic exams are often a source of anxiety for students in the MDSC 521 course since they are unfamiliar with this type of assessment. To enable success on these exams, I arrange additional lab time with laboratory staff near these exams for students to prepare. Furthermore, I have created a practice peripatetic exam for each midterm that the students complete followed by a detailed discussion of each question and tips so that each student understands how best to approach this type of exam. Together this feedback creates transparent expectations, builds a trusting student-instructor relationship, and following exams students express appreciation for the fairness of exams.

The ultimate role of an educator is to inspire curiosity. Throughout my life I have had the privilege to observe, interact with, and teach alongside some exceptional educators. Their mentorship has been crucial in stimulating my own inquiry in anatomy, and exploring my own teaching philosophy and academic pursuits. As an educator, my holistic objective during every teaching encounter is to transmit my enthusiasm for anatomy and spark curiosity in others. I always find conveying my passion for learning to be a positive reciprocal experience during interactions with students since this passion becomes contagious. Quite simply, as an educator I thrive when I am able to share in the *light bulb* moments with students.

Educational scholarship is not a synonym for excellent teaching. Rather educational scholarship seeks to establish and enhance evidence-based practice in teaching. As an academic, I endeavor to contribute the scholarship of teaching through my research. My experiences as a student, facilitator, and teacher of gross anatomy have highlighted a common struggle amongst learners to comprehend the spatial relationships of anatomical structures and subsequent clinical implication. These experiences also directed my interests to the field of medical education and trigger my current research questions relating to spatial perception and learning. My foundation in basic sciences has prompted me to address these problems from a technical scientific approach through the use of current neurosciences research in my doctoral research studies titled "The neural correlates of two and three dimensional object processing: Implications for spatial perception and learning". This research will contribute to our understanding of the biology of learning, and establish quantitative neuropsychological variables that measure learning thus enabling a direct measure of knowledge acquisition that can be used to strategically assess and optimize new forms of teaching, learning, and evaluation.